

(FILE 'USPAT' ENTERED AT 10:30:30 ON 28 JAN 1998)

L1 16 S POLYMETHYLCYCLOSILOXANE
L2 1468 S OCTAMETHYLCYCLOTETRASILOXANE
L3 456 S DECAMETHYLCYCLOPENTASILOXANE
L4 1520 S L2 OR L3
L5 25088 S 65/CLAS
L6 13 S L4 AND L5
L7 1345 S CYCLIC (3A) SILOXANE
L8 1 S L5 AND L7
L9 0 S L4 AND 285/CLAS
L10 1 S 385/CLAS AND L4

FILE 'JPOABS' ENTERED AT 10:38:00 ON 28 JAN 1998

L11 1 S L1
L12 64 S L4
L13 133019 S FIBER OR FIBRE OR WAVEGUIDE OR LIGHTGUIDE
L14 3 S L12 AND L13

FILE 'EPOABS' ENTERED AT 10:39:42 ON 28 JAN 1998

L15 1 S L14
L16 1 S L1
L17 49 S CYCLOSILOXANE
L18 20 S L13 AND L17

FILE 'USPAT' ENTERED AT 10:41:26 ON 28 JAN 1998

L19 526 S L4 AND L13
L20 120 S L17 AND L13
L21 25088 S 65/CLAS
L22 6 S L21 AND L20

L11 ANSWER 4 OF 4 CA COPYRIGHT 1998 ACS

AN 113:236494 CA

TI Manufacture of vitreous silica products by vapor-phase oxidation of
silica precursors in a flame, and the products obtained

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PA TSL Group PLC, UK

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

PI WO 9010596 A1 900920

DS W: AU, CA, FI, GB, JP, KR, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE

AI WO 90-GB384 900314

PRAI GB 89-5966 890315

DT Patent

LA English

IC ICM C01B033-18

CC 57-1 (Ceramics)

AB In the title process, .gtoreq.60% of the SiO₂ in the products is obtained by oxidn. of (a) .gtoreq.1 straight-chain Si compds. having general formula R₃SiO(SiR₂O)_nSiR₃ (n = integer; R is .gtoreq.1 of (substituted) alkyl, (substituted) Ph, OH, and vinyl) and/or (b) .gtoreq.1 volatile, cyclic Si compd. having general formula Si_nO_nR_{2n} (n = integer >2). The products may be in the form of fume, porous SiO₂ soot, or fully densified bodies, and are not contaminated with Cl. Octamethylcyclotetrasiloxane vapor in a N carrier flow was oxidized in a H-O flame to give a soot body that was sintered to give a high-purity vitreous

SiO₂ tube contg. <1 ppm OH.

ST SiO₂ tube contg. <1 ppm OH.

flame oxidn precursor vitreous silica; siloxane vapor phase oxidn

silica; dopant flame oxidn precursor silica

IT Cyclosiloxanes

Siloxanes and Silicones, reactions

IT RCT (Reactant)

(oxidn. of, vapor-phase, in flame, for chlorine-free vitreous
silica products)

IT Optical fibers
(vitreous silica, manuf. of doped, by vapor-phase oxidn. of
dopant precursor-contg. siloxanes in hydrogen-oxygen flame)

IT Oxidation
(gas-phase, of siloxanes and cyclosiloxanes, in flame, for
chlorine-free vitreous silica products)

IT 109-63-7 13963-57-0

IT RL: USES (Uses)
(cyclosiloxane vapors contg., flame-oxidn. of, for
chlorine-free doped vitreous silica)

IT 60676-86-0P, Vitreous silica

IT RL: PREP (Preparation)
(fume or soot or densified, manuf. of, by vapor-phase
oxidn. of silica precursors in flame)

IT 541-02-6, Decamethylcyclopentasiloxane 556-67-2

IT RL: RCT (Reactant)
(oxidn. of, vapor-phase, in flame, for chlorine-free vitreous
silica products)

(FILE 'HOME' ENTERED AT 10:50:26 ON 28 JAN 1998)

FILE 'CA' ENTERED AT 10:50:45 ON 28 JAN 1998

L1 0 S POLYMETHYKCYCLOSILLOXANE
L2 9 S POLYMETHYLCYCLOSILLOXANE
L3 2292 S OCTAMETHYLCYCLOTETRASILLOXANE
L4 908 S HEXAMETHYLCYCLOTRISILLOXANE
L5 533 S DECAMETHYLCYCLOPENTASILOXANE
L6 21592 S WAVEGUIDE OR LIGHTGUIDE OR LIGHT GUIDE
L7 1243 S CYCLOSILLOXANE
L8 3920 S L2 OR L3 OR L4 OR L7
L9 2 S L8 AND L6
L10 9071 S SOOT
L11 4 S L10 AND L8
L12 5261 S FUME NOT L10
L13 7 S L12 AND L8
L14 1582 S HEXAMETHYLDISILLOXANE
L15 2 S L14 AND (L10 OR L12)